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ABSTRACT

The Basic Trilingual Program at Flushing High School in Queens, New York City, provides instruction in English as a second language, native language arts instruction, and bilingual instruction in different content areas to Spanish speaking and Korean speaking high school students of limited English proficiency. The program is also involved in curriculum development, staff training, counseling and supportive services, and the provision of opportunities for parent involvement in the program. This report describes the context, participants, organization, instructional and noninstructional components, and evaluation of the program during 1981-82. Evaluation findings indicate that: (1) Spanish speaking students demonstrated statistically significant gains in English reading achievement, but Korean speaking students did not; (2) Spanish speaking students achieved more English syntax objectives than Korean speaking students; (3) participants' passing rates in mathematics, science, and social studies were greater than 50 percent; (4) both Hispanics and Koreans had passing rates of over 70 percent in teacher made tests for their respective native language arts; and (5) participants' attendance rates were higher than the school-wide rate. Recommendations for program improvement are presented. (MJL)

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ED229495

O.E.E. Evaluation Report

March, 1983

FLUSHING HIGH SCHOOL

A BASIC TRILINGUAL PROGRAM

1981-1982

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Mr. James Costaras

Director:
Ms. Joyce Thompson Grabowski

UD 022 782

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TABLE OF CONTENTS

		PAGE
I.	DEMOGRAPHIC CONTEXT	1
	Environment	1
	Site Characteristics	2
II.	STUDENT CHARACTERISTICS	5
	Composition and Diversity	5
III.	PROGRAM DESCRIPTION	12
	Program Philosophy	12
	Program History	12
	Funding	12
	Program Organization	15
IV.	INSTRUCTIONAL COMPONENT	17
	Placement and Programming	17
	Instructional Offerings	17
	Bilingual Students in Mainstream Courses	21
V.	NON-INSTRUCTIONAL COMPONENT	23
	Curriculum and Materials Development	23
	Staff Characteristics	24
	Staff Development	25
	Supportive Services	25
	Parental and Community Involvement	26
	Affective Domain	26
VI.	FINDINGS	31
	Assessment Procedures, Instruments, and Findings	31
	Summary of Findings	53
VII.	CONCLUSIONS AND RECOMMENDATIONS	56

LIST OF FIGURES AND TABLES

		PAGE
Figure 1:	Organization of the Trilingual Program at Flushing High School.	16
Table 1:	Dominant Languages of Students in Flushing High School.	4
Table 2:	Number and Percentages of Students by Language and Country Birth.	6
Table 3:	Number and Percentages of Students by Sex and Grade.	8
Table 4:	Number of Spanish-Speaking Students by Age and Grade.	9
Table 5:	Number of Korean-Speaking Students by Age and Grade.	10
Table 6:	Funding of the Instructional Services to Spanish Speaking Students.	13
Table 7:	Funding of the Non-Instructional Component	14
Table 8:	Instruction in English as a Second Language.	18
Table 9:	Instruction in the Native Language.	19
Table 10:	Bilingual Instruction in Content Areas.	20
Table 11:	Enrollment in Mainstream Courses.	22
Table 12:	Staff Characteristics.	28
Table 13:	Staff Training Workshops, 1981-1982.	30
Table 14:	Results of the New York City Reading Test (Spanish-Speaking Students).	36
Table 15:	Results of the New York City Reading Test (Korean-Speaking Students).	37

LIST OF FIGURES AND TABLES
(continued)

		PAGE
Table 16:	Performance of Students Tested on the Criterion Referenced English Syntax Test (Spanish-Speaking Students, Fall).	38
Table 17:	Performance of Students Tested on the Criterion Referenced English Syntax Test (Spanish-Speaking Students, Spring).	39
Table 18:	Performance of Students Tested on the Criterion Referenced English Syntax Test (Korean-Speaking Students, Fall).	40
Table 19:	Performance of Students Tested on the Criterion Referenced English Syntax Test (Korean-Speaking Students, Spring).	41
Table 20:	Performance of Students Tested on the Criterion Referenced English Syntax Test (All Program Students, Fall).	42
Table 21:	Performance of Students Tested on the Criterion-Referenced English Syntax Test (All Program Students, Spring).	43
Table 22:	Number and Percent of Spanish-Speaking Students Passing Teacher-Made Examinations in Content-Area Subjects by Language of Instruction (Fall).	44
Table 23:	Number and Percent of Spanish-Speaking Students Passing Teacher-Made Examinations in Content-Area Subjects by Language of Instruction (Spring).	46
Table 24:	Number and Percent of Korean-Speaking Students Passing Teacher-Made Examinations in Content-Area Subjects.	48
Table 25:	Number of Spanish Speaking Students Attending Courses and Percent Passing Teacher-Made Examinations in Native-Language Arts (Fall).	49
Table 26:	Number of Spanish-Speaking Students Attending Courses and Percent Passing Teacher-Made Examinations in Native-Language Arts (Spring).	50

LIST OF FIGURES AND TABLES
(continued)

PAGE

Table 27: Significance of the Difference Between Attendance Percentage of Spanish-Speaking Program Students and the Attendance Percentage of the School. 51

Table 28: Significance of the Difference Between Attendance Percentage of Korean-Speaking Program Students and the Attendance Percentage of the School. 52

THE TITLE VII TRILINGUAL PROGRAM AT FLUSHING HIGH SCHOOL

Location:	35-01 Union Street Flushing, New York 11354
Year of Funding:	Second year of a three-year grant
Target Population:	200 Hispanics 35 Koreans
Target Languages:	Spanish, Korean
Principal:	Mr. James Costaras
Project Director:	Ms. Joyce Thompson Grabowski

I. DEMOGRAPHIC CONTEXT

ENVIRONMENT

Flushing High School is located on Northern Boulevard, a major thoroughfare in Queens that is two blocks from the heart of Flushing's commercial sector. The school serves an attendance area that is becoming increasingly diverse. The northern sector is characterized by private houses that would not be out of place in a middle- to upper-class white suburban setting. Some apartment buildings also exist within this area. South of this region lies Corona-Jackson Heights, a somewhat integrated middle- and working-class neighborhood where most of the school's Hispanic students live.

The school's attendance district has undergone major changes. Extremely acessible to public transportation, it has become the second largest Asian-American community in New York City, with Koreans comprising the largest single group accounting for this influx. In addition to living in the area, the relatively new Korean population has affected

the area as a whole through the purchase of stores, the construction of buildings, and the creation of businesses. As a result, they have contributed significantly and visibly to the community's economic viability. While they have lived in the area for a somewhat longer time than the Asian residents, the Hispanic population represents a significant population shift since 1970. During the following decade, the Hispanic population in Queens doubled. The Corona-Jackson Heights area served by Flushing High School is the fastest growing Latin American community in New York City and one which contains one of the two largest communities of immigrants from the Dominican Republic.

The school population is only partly representative of its attendance district. The children of most of the 25,000 Koreans in it attend private schools, travel to schools in Chinatown, or go to nearby Newtown High School, where a large Asian bilingual program serving Koreans has been in operation for years. The ethnic breakdown of the student population is Asian, 9.1 percent; Hispanic, 25 percent; black, 22.1 percent; and white, 48.8 percent.

SITE CHARACTERISTICS

A comprehensive high school, Flushing High School has 2,100 students in grades nine through twelve. At the time of the site visits in spring 1982, enrollment had dropped to 1,925 students, a decrease apparently due to the resolution of the status of long-term truants. The percentage of Asian and Hispanic students has been increasing each year. In recognition of this trend, the administration hopes that one

result of its emphasis on English language acquisition and career orientation will be an increase in the size of the student body.

Originally built in 1875, Flushing High School had a new wing added in 1965. Both the exterior landscaping and the interior of the building are well maintained. The program office is located on the first floor and is adjacent to the resource room where materials are kept. The resource room is also used by program staff for individual and small-group instruction, student and parent consultations, and class preparation. Table 1 lists the dominant languages of students in the school as a whole and the percent classified as of limited English proficiency (LEP).

TABLE 1

Dominant Languages of Students in Flushing High School

Language	No. Students	% Total Enrollment	%LEP
Spanish	481	25	28
Korean	[illegible]	3	63
Greek	47	2	2
Chinese	63	3	52
Italian	41	2	2
French	19	1	5
Amharic	6	<1	100
Farsi	9	<1	78
Russian	17	1	71
Bengali	3	<1	0
Urdu	10	<1	60
Hindi	16	1	19
Turkish	2	<1	0
Tagalog	8	<1	0
Vietnamese	2	<1	100
Thai	2	<1	100
Polish	1	<1	0
German	6	<1	0
Cambodian	1	<1	0
Gujarati	4	<1	0
Serbo-Croatian	7	<1	0
Portuguese	1	<1	0
Uzbek	3	<1	100
Punjabi	2	<1	50
Yiddish	1	<1	0
Hungarian	1	<1	0
English	1,112	58	0

.Students represent 26 different languages and/or dialects.

.Twenty-eight percent of the Hispanic students need bilingual services.

.Sixty-three percent of the Korean students need bilingual services.

.Of a total of 813 students whose native language is other than English, 251 qualify for bilingual services.

II. STUDENT CHARACTERISTICS

COMPOSITION AND DIVERSITY

The trilingual program's target population consists of 200 (84 percent) Hispanic students and 38 (16 percent) Korean students. While 5 percent of the Hispanics were born in the United States, the remaining 85 percent are foreign-born. Of the foreign-born Hispanic students, approximately 48 percent are from the Dominican Republic and the rest from a number of other Caribbean and Latin American countries. Table 2 presents the number of program students by countries of birth.

Distinct differences exist in terms of linguistic and academic preparedness between the Hispanic and Korean students. Among the Hispanics academic background varies greatly, ranging from those who have had no formal schooling and have been placed in high school because of their age to those with some previous high school education. Approximately ten percent of Hispanic program students are functionally or totally illiterate in their native language, a fact that presents a major obstacle to their learning both English and the subject matter necessary for high school graduation. The staff feels that the previous education of the Dominican students is especially poor; many come from rural areas whose dilapidated schools reflect the general poverty of the inhabitants. The staff observed that students from other Latin American countries seem far better prepared than those from the Dominican Republic.

Mostly recent immigrants, the Korean students have attended schools in their native country, where they have mastered at least rudimentary academic skills, and, in many instances, begin work in the program

TABLE 2

Number and Percentages of Program Students by

Language and Country of Birth

Language	Country of Birth	Number	Percent
Spanish	Puerto Rico	8	3.4
	Dominican Republic	111	47.6
	Cuba	4	1.7
	Honduras	4	1.7
	Guatemala	1	0.4
	Costa Rica	2	0.9
	El Salvador	4	1.7
	Nicaragua	1	0.4
	Colombia	31	13.3
	Ecuador	16	6.9
	Peru	1	0.4
	Paraguay	1	0.4
	Venezuela	2	0.9
	Argentina	1	0.4
	U.S.	11	4.7
	Total Hispanic	198	85.0
Korean	Korea	35	15.0
	Total	233	100.0

.Eighty-five percent of the program students are Spanish-speaking. Of these, 95 percent are foreign-born.

.Fifty-six percent of the Spanish-speaking students were born in the Dominican Republic.

.Fifteen percent of all program students are Korean-speaking and were born in Korea.

.Only 4.7 percent of the program students are U.S.-born.

with an already high level of academic preparedness. Even while they still lack English proficiency, many of these students are enrolled in advanced classes in mathematics and sciences in which they excel. By the time they are promoted to the advanced level of English as a second language (E.S.L.), they are already studying calculus. Beginning with literacy in their native language and a grasp of basic skills, these students transfer this knowledge with relative ease.

Whereas the Korean students come from an extremely stable community, the Hispanic students come from a highly mobile one. The staff noted that many Hispanic students' education was interrupted because families returned to their homelands for various reasons. In addition, economic difficulties in their families increase the likelihood that the Hispanic students will leave school to supplement their families' inadequate incomes. The staff felt that the academic performance of some of the Hispanic students might be hindered by their proximity to Jackson Heights, a neighborhood that borders Corona and is a major drug dealing center in the borough. All of the factors, they felt, might have a negative effect on the Hispanic students' chance for success in the program.

The distribution of female and male students in the program approximates that of the general school population in which female students outnumber males. Table 3 provides this information.

TABLE 3

Number and Percentages of Students by Sex and Grade

Grade	Male	Percent of Grade	Female	Percent of Grade	Total	Column Total: Percent of All Students
9	27	42	38	58	65	28
10	29	40	44	60	73	31
11	24	39	38	61	62	27
12	14	41	20	59	34	14
TOTAL	94	40	140	60	234	100

- The largest proportion of students are in grade 10.
- Of the program students, 60 percent are females, and 40 percent are males.
- The proportion of males to females is fairly uniform for all of the grades.

Most program students, as has been indicated, are immigrants. Their educational histories are considerably varied. Many have suffered interrupted schooling, or a lack of educational opportunities in their countries of birth. Tables 4 and 5 present the number of Spanish-speaking and Korean-speaking students by age and grade.

TABLE 4

Number of Spanish-Speaking Students by Age and Grade

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
13	2	0	0	0	2
14	18	0	1	0	19
15	15	19	0	0	34
16	21	20	13	0	54
17	4	12	19	7	42
18	2	6	11	9	28
19	0	3	3	10	16
20	0	0	0	2	2
TOTAL	62	60	47	28	197
OVERAGE STUDENTS:					
Number	27	21	14	12	74
Percent	43.5	35.0	29.7	42.8	37.5

Note. Shaded boxes indicate expected age for the grade.

- Thirty-seven percent of the Spanish-speaking students are overage for their grade. The greatest proportion of overage students are in grade 9 (43.5 percent), followed by grade 12 (42.8 percent).

- Most students are 16 and 17 years of age. These are mostly in grades 10 and 11.

TABLE 5

Number of Korean-Speaking Students by Age and Grade

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
14	0	0	0	0	0
15	1	4	0	0	5
16	0	6	2	0	8
17	1	2	5	1	9
18	0	1	4	1	6
19	0	0	3	2	5
20	0	0	0	1	1
TOTAL	2	13	14	5	34
OVERAGE STUDENTS:					
Number	1	3	7	3	14
Percent	50.0	23.0	50.0	60.0	41.1

Note. Shaded boxes indicate expected age for the grade.

- Forty-one percent of the Korean-speaking students are overage for their grade. The greatest proportion of overage students are in grade 12 followed by grade 11.

- Excluding grade 9, the proportion of overage students increases as grade increases. Grade 10 has the smallest proportion of overage students.

- Most students are 16 and 17 years of age. These are primarily in grades 10 and 11.

The high proportions of overage students suggest that special consideration should be made when setting standards of performance for these groups and interpreting their outcomes. Many students have been placed in a grade because of their age, not their academic preparedness. As a result, they may lack cognitive and linguistic proficiency in their native language, which has implications for their ability to acquire oral and literacy skills in English.

III. PROGRAM DESCRIPTION

PROGRAM PHILOSOPHY

Transition is stressed for all program students. Program staff and school administration share the view that LEP students should receive instruction in their native language, while they learn English. Once they become proficient in their second language and seem able to function outside the program, they are mainstreamed. Such an emphasis gains support from the existence of some mainstream courses that are designed for linguistic minority students and use an E.S.L. approach to facilitate their success.

PROGRAM HISTORY

The trilingual program has emerged out of a history of support for bilingual education on the part of the school administration. Prior to the enactment of Title VII, the principal initiated a tax-levy program that stressed E.S.L. and eventually provided full bilingual instruction for Hispanic students. The trilingual program extended the scope of the earlier tax-levy program by including Korean students, expanding course offerings, and improving such areas as identification and placement of students, individual attention to students, staffing, community outreach, and supportive services.

FUNDING

Table 6 indicates funding of the instructional component. Table 7 provides the same information for the non-instructional component.

TABLE 6

Funding of Instructional Services to Spanish-Speaking Students

Component	Funding Sources(s)	Number of Teachers	Number of Classes
E.S.L.	Tax-Levy P.S.E.N.	2 1	3,5 5
Writing Lab	Tax-Levy	1	1
Native Language	Tax-Levy	3	3 each
Mathematics	Tax-Levy	1	3
Social Studies	Tax-Levy	3	1,2,4
Science	Tax-Levy	1	4
Other (Voc. Ed., Etc.)	Tax-Levy	3	1,2,3

.Korean students participate in E.S.L. classes, the Civics for New Americans course, and academic courses offered in the mainstream.

.One Korean-speaking and three Spanish-speaking paraprofessionals assist in the bilingual program classes.

TABLE 7

Funding of Non-Instructional Component

Component	Funding Source(s)	Personnel Number	Personnel Title(s)
Administration & Supervision	Tax-levy Title VII	1 1	Principal Project Director
Curriculum Development	Title VII	1	Resource Teacher
Supportive Services	Title VII	1	Bil. Guid. Counselor
Staff Development	Title VII	1	Project Director and Rotating Teacher Trainers
Parental & Community Involvement	Title VII	1	Project Director

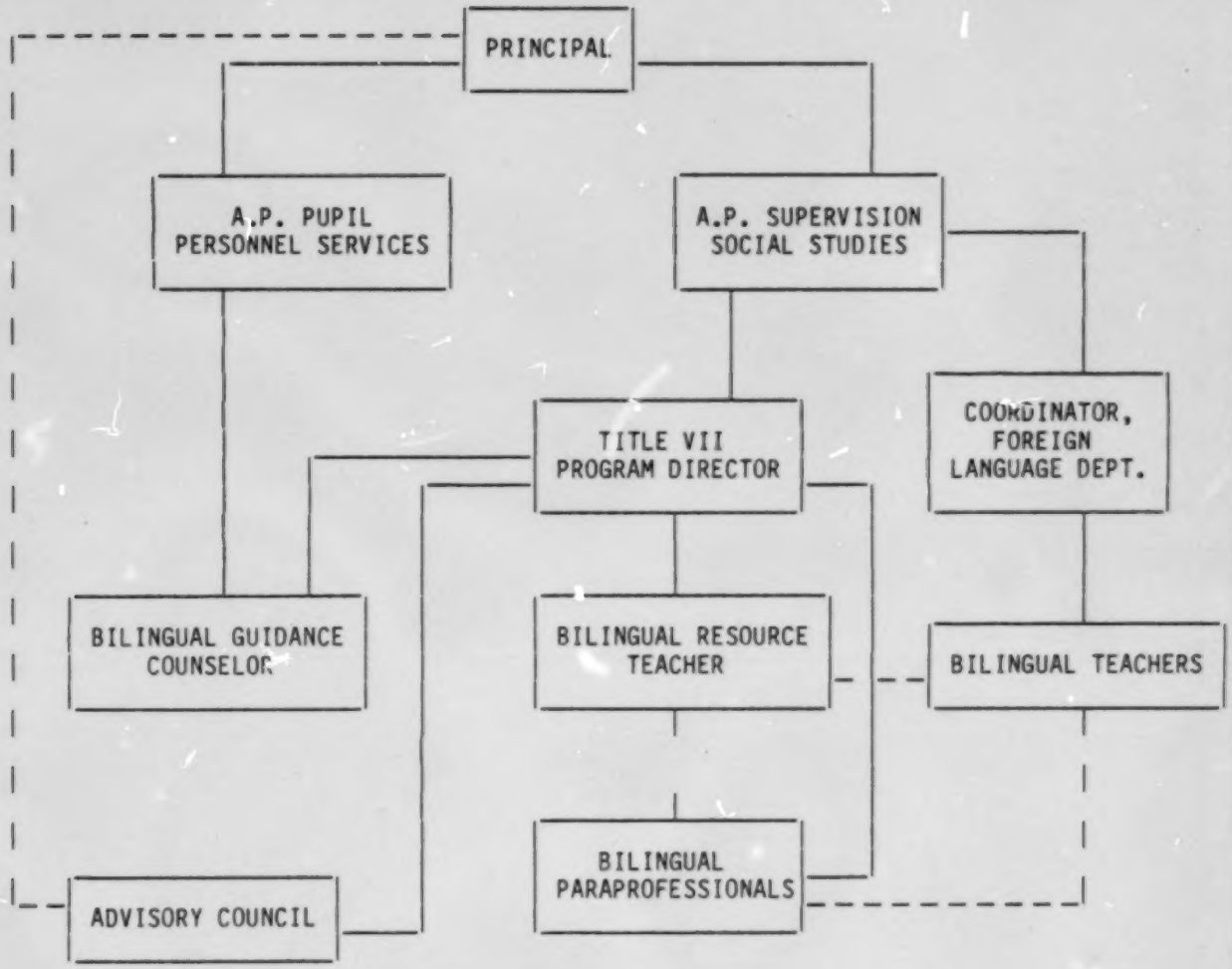
PROGRAM ORGANIZATION

Within the school's administrative framework, the assistant principal in charge of social studies has supervisory responsibility for the foreign language, E.S.L., and the trilingual program. The program director has direct responsibility for the smooth operation of the bilingual program. She attends regular meetings with the principal and other department heads.

Figure 1 depicts the program organization within the school as a whole.

FIGURE 1

The Organization of the Trilingual Program at Flushing High School



IV. INSTRUCTIONAL COMPONENT

PLACEMENT AND PROGRAMMING

Placement of students in the trilingual program begins in some instances at the junior high school level when the staff visits feeder schools near the end of the school year in order to administer placement tests in E.S.L., native language arts, and mathematics and to observe prospective program participants. The score on the Language Assessment Battery test (LAB) is considered for all prospective program students. Hispanic and Korean students who score at or below the twenty-first percentile are eligible for the program. Students are also eligible if they score higher than this, but are two or more years below grade level on a standardized test of English. All students are then interviewed by the guidance counselor who examines their test scores and school profiles in order to confirm placement and devise an appropriate individual program. Much of what appeared in the 1979-80 evaluation report concerning student programming remained unchanged.

INSTRUCTIONAL OFFERINGS

English as a Second Language

Six levels of E.S.L. classes have been scheduled. After completing level six, a student is mainstreamed or, if necessary, put into a transitional English class that will further prepare the student for a mainstream English class. Table 8 lists courses in E.S.L. offered during the 1980-81 year.

TABLE 8

Instruction in English as a Second Language

Courses	Number of Classes		Average Class Reg.		Class Pds. Per Week	Description
	Fall	Spring	Fall	Spring		
E.S.L. 1	1	1	42	26	10	Beginning CREST objectives/emphasizing
E.S.L. 2	1	2	26	18	10	oral skills
E.S.L. 3	2	1	24	22	10	Intermediate CREST objectives/emphasizing
E.S.L. 4	1	1	17	29	10	reading and writing
E.S.L. 5	2	1	32	33	5	Advanced CREST objectives/emphasizing
E.S.L. 6	1	2	36	20	5	writing skills
English Transition	1	1	33	33	5	Mainstream English for ex-E.S.L./emphasizing writing skills

Native-Language Instruction

In its second year of operation, the program expanded its offerings in Spanish native-language instruction so that it makes up a ten-term sequence. This sequence includes the advanced Spanish classes, which constitute the last four terms of the N.L.A. program design. These classes include some non-LEP Hispanic students who have advanced facility with Spanish; in addition to their gaining experience from taking classes designed for students for whom Spanish is not a "foreign language," their presence provides program students with valuable contact with the school's mainstream population, thereby decreasing their sense of isolation from the school as a whole. Table 9 lists native-language courses, all of which meet five times a week.

TABLE 9

Instruction in the Native Language

Courses	Number of Classes		Average Class Reg.		Description	Curriculum or Material in Use
	Fall	Spring	Fall	Spring		
Basic N.L.A.	2	2	25	25	Fundamentals of writing, spelling, and grammar	Title I Curriculum and in-house courses of study
Intermediate N.L.A.	2	2	39	33	Intermediate grammar and introduction to literature	"
Advanced N.L.A.	2	2	34	29	Advanced grammar and literature of Spain	"
N.L.A. 4 yr.	1	1	20	20	Advanced literature (Spain, South American, World Literature)	"
N.L.A. 5 yr.	1	1	20	20		

Bilingual Instruction in Content Areas

Table 10 provides information on the bilingual classes taught in 1981-82. With an average class register of 30, classes met five periods per week and carried credit leading to an academic diploma. Students were selected on the basis of counselor and teacher recommendations. Materials used were appropriate to the students' reading abilities. In the bilingual algebra class observed by the evaluator, the teacher used a Spanish workbook and an English textbook, because the Spanish version of the textbook was too difficult for the students; the tenth- and eleventh-grade students in this class were fully bilingual and were therefore able to use material in both languages. In this class, Spanish was used as the language of instruction 95 percent of the time.

While bilingual courses are offered only in Spanish, the course in civics for new Americans incorporates native language arts for Korean

TABLE 10

Bilingual Instruction in Content Areas

Courses	Number of Classes		Language of Instruction	Percent of Materials in Native Language	Do Materials Correspond to Mainstream Curriculum ?
	Fall	Spring			
World History	2	2	100% Spanish	100	Yes
American History	1	1	85% Spanish	100	Yes
Geography	1		100% Spanish	100	Yes
Economics		1	85% Spanish	100	Yes
Civics for New Americans	1	2	100% English	15	No*
Bilingual Civics		2	100% Spanish	100	No*
Math Fundamentals	1	2	100% Spanish	100	Yes
Pre-Algebra	1	1	100% Spanish	50	Yes
Alegbra	1	1	100% Spanish	50	Yes
General Science	2	2	85% Spanish	100	Yes
Biology	2	2	85% Spanish	100	Yes
Language Arts Art		2	100% English	0	No
Language Arts Music	1	1	100% English	0	No
Language Arts Typing	2	3	100% English	0	No

*No equivalent exists in mainstream classes; special orientation course for bilingual students.

students through class and homework assignments. The civics course observed by an evaluator included both Hispanic and Korean students, though the majority were Korean. Although the Korean paraprofessional was absent on the day the class was visited, she works closely with the teacher, providing immediate assistance to Korean students during the class, and developing review material, and assignments for them in Korean. The class uses an E.S.L. oriented book, although many of the units in it are made available in translation for the students in Spanish and Korean.

BILINGUAL STUDENTS IN MAINSTREAM COURSES

Since their numbers are too small for it to be feasible to organize bilingual subject-area classes for them, Korean students take most of their academic subjects in the mainstream. In a course in which they are heavily enrolled, like calligraphy, special attention can be paid to English-language skills. Ninety-eight percent of the Korean students tested for inclusion in the program take advanced placement tests in mathematics and science, and, for the most part, are placed in such courses. Many of these students take a transitional English course offered by the department prior to taking other mainstream English classes. An evaluator observed one such class, which was made up of both Korean and Hispanic students.

Table 11 lists mainstream courses in which Korean and Hispanic students were enrolled during the 1981-82 year. As many be seen bilingual students participate in a broad range of mainstream classes.

TABLE 11

Student Enrollment in Mainstream Courses

COURSE TITLE	FALL SPANISH STUDENTS	FALL KOREAN STUDENTS	SPRING SPANISH STUDENTS	SPRING KOREAN STUDENTS
General Math I	2			
Business Math	10		8	
Algebra I Academic	10	3	2	4
Algebra II Academic		4	2	3
Algebra III Academic			1	
Intermediate Algebra I	3	7	4	6
Intermediate Algebra II		2	1	7
Geometry I	3	5	2	3
Geometry II		1	3	5
Advanced Algebra & Trig.		1		1
Computer Science		1		4
Advanced Placement Math		4		4
Liberal Arts Math			2	
Fundamental Math			12	
Fundamental Math II	1			
Pre-Algebra	12			
Biology I Acad.		3		
Biology I Gen.	7	5	4	3
Biology II Acad.		1	1	5
Biology II Gen.	2	1	7	2
Gen. Science I	11		1	
Gen. Science II			8	
Science			1	
Chemistry		4		4
Earth Science	3		2	
Physics		4		3
Med. Lab. Tech.	1		1	
Basic Skills of Science	8		10	5
Astronomy				1
Energy Conservation		6		4

COURSE TITLE	FALL SPANISH STUDENTS	FALL KOREAN STUDENTS	SPRING SPANISH STUDENTS	SPRING KOREAN STUDENTS
American Hist. I Acad.	2	10	1	7
American Hist. I Gen.	2	1	1	1
World Hist. I Acad.	1	2		
World Hist. I Gen.	13		2	
World Hist. II Acad.				1
World Hist. II Gen.	2		7	
World Geog. I Acad.	1			
Economics Acad.			2	2
Economics Gen.		4	4	3
Consumer Econ.			1	
American Studies	2			
World Culture	10		10	
Amerian Studies II	7			
Civics for New Americans	1	10		20
Global History	13		5	
Ancient & Med. History		1		
Revolution & Violence			2	
Typing	2		3	
Accounting	1	1		1
Comm. Record Keeping			1	
Photog. & Language Arts	1		1	
Typing & Language Arts	15	5	21	10
Music & Language Arts	1	1	8	8
Fine Arts & Language Arts	3	1	15	11
Elem. Band	1		2	
Guitar			2	

V. NON-INSTRUCTIONAL COMPONENT

CURRICULUM AND MATERIALS DEVELOPMENT

In addition to translating and adapting existing materials and texts, program staff has developed or adapted for program students a number of courses during the 1981-82 year: Basic N.L.A. Spanish; civics for new Amerians; calligraphy; typing; and E.S.L. program-developed material in civics and calligraphy is being reviewed for possible use in mainstream classes.

Extensive work was done in developing a two-semester sequence in N.L.A. For the first term, a student activity workbook was developed to accompany the course of study that had been created during the 1980-81 year. The workbook provides supplementary activities in vocabulary development, grammar, spelling, punctuation, and other aspects of composition. The course of study that was developed for the second term included term objectives, a list of textbooks and materials, a term calendar, and a weekly course guide that lists weekly objectives and includes student worksheets, a daily breakdown of weekly materials and weekly model lesson plans. In addition, program staff devised and/or selected evaluation instruments and techniques focusing on reading comprehension, spelling, vocabulary, and composition. A student activity workbook was also developed to reinforce the skills introduced during the previous term.

The civics for new Americans course was developed in both an English and Spanish version. For the two-term English version, a course of study was developed which incorporates E.S.L. methodology into the

teaching of civics. The course orients foreign students to the Flushing neighborhood and to New York City. The course of study includes performance and skills objectives, a content outline, and daily lesson plans which include reading selections and student activities. The course of study for the second term was also completed. This term includes an introduction to the geography of the United States, a unit on immigration, and an introduction to the federal government. Resource units were also developed in Spanish for the two-semester sequence. Three units, the Flushing community, New York City, and the immigrant experience, have been completed and a fourth unit, the United States government, is 75 percent done. Each resource unit includes reading selections, vocabulary reinforcement, and review questions.

An outline was written for the calligraphy course which reinforces the students' writing skills while teaching the subject matter. A two-term course outline for typing, another language arts elective, was also completed. Course outlines were developed for levels one to six of E.S.L., and exit examinations for each E.S.L. level were prepared.

It is expected that during the summer of 1982 further curriculum development and translation will be done for both basic and advanced N.L.A., for civics (second semester), and for E.S.L.

STAFF CHARACTERISTICS

Table 12 indicates the characteristics for professional and paraprofessional staff. Many have extensive teaching experience in and

outside of bilingual education. Three of the bilingual content-area teachers, however, are teaching subjects outside of their area of license. Of these, two are experienced teachers; one is relatively new.

STAFF DEVELOPMENT

Spurred partly by the results of two needs assessment studies, the program initiated a much more active series of staff development activities than existed during its first year. Teacher attendance and enthusiasm increased considerably over the previous year. Instead of having two specialists again conduct the training sessions, peer group workshops were scheduled with different teachers taking responsibility for introducing a particular topic. Table 13 lists the staff training workshop sequence that was conducted during the spring 1982 term.

SUPPORTIVE SERVICES

The guidance counselor provides individual and group counseling. She handles discipline problems referred to her by the coordinator, as well as doing both crisis and preventative counseling. While she works primarily with the students, she meets with their parents when necessary. She makes referrals to such community resources as the Flushing Mental Health Clinic and Elmcor Youth and Adult Activities, Inc.

In addition to personal counseling, she brings in outside speakers from colleges to talk to students abut career and educational possibilities. Having received training from staff at neighboring colleges, the staff assists the guidance counselor in advising students on

such aspects of college application as forms, requirements, and financial aid. While she supports these activities, the coordinator plans to introduce a greater degree of career information and orientation into the program so that students who are not college-bound can be better served.

Only two program students have been identified as in need of special education services. While in the past such students have had to travel to Eastern District High School in Brooklyn or Brandeis High School in Manhattan for these services, beginning in the fall of 1982 they will be referred to William Bryant High School in Queens.

PARENTAL AND COMMUNITY INVOLVEMENT

Ongoing contact with parents is maintained through telephone calls, letters, and the monthly program newsletter. In addition, a Parent Advisory Committee with 12 to 20 mostly Hispanic members of whom seven formed the core group, met every other month to consider such practical matters as planning for next year's bilingual program and submiting new proposals. The program distributed information to parents about the adult education courses at Flushing High School, the E.S.L. program at the Korean Center, and the English-language classes at Queens College. Parents attended open school week meetings and frequently visited classroom programs on an individual basis.

AFFECTIVE DOMAIN

Student attitudes toward the program appear to be extremely positive. Attendance is about 95 percent and program students have received several awards, including the Queens College President Award and

the Art Award given by the U.F.T. Students are active in school-wide clubs and athletics, although 30 to 40 percent of them work after school. No students have been suspended during the 1981-82 year and discipline, in general, has not been a problem among program students. In addition to the academic performance of program students, all of these facts are indicators of the students' close identification with the program.

TABLE 12

Staff Characteristics: Professional and Paraprofessional Staffs

Function(s)	% Time Spent in Function	Date Hired	Education	Certification and License	Total Years of Experience	Years of Bilingual Experience	Years of Experience (E.S.L.)
Project Director	100	10/80	B.A. M.A. Spanish	NYS Spanish DHS/Supervision		15	2
E.S.L. Teacher	60	9/69	B.A. Spanish, M.A. & 30 credits Spanish	NYS Spanish H.S.	21 (Spanish, E.S.L.)	7	5
E.S.L. Teacher	100	9/70	B.A. M.A. Linguistics	NYS E.S.L. H.S.			12
E.S.L. Teacher	100	9/71	B.A. Journalism M.A. Linguistics	NYS E.S.L. H.S.		3	16
N.L.A. Spanish Teacher	60	9/59	B.A., M.A. & 30 credits Spanish	NYS Spanish H.S.	25	3	
N.L.A. Spanish Teacher	60	9/75,	B.A. M.A. Spanish	NYS Spanish DHS Bilingual Social Studies DHS	21	7	2
N.L.A. Spanish Teacher	60	2/81	B.A. Spanish, French M.A. Ed. Spanish	NYS Spanish DHS French DHS	4	2	
Bilingual Social Studies Teacher	20	2/64	B.A. Spanish & 60 credits	NYS Spanish DHS	25	6	
Bilingual Social Studies Teacher	80	9/78	B.A. M.A. French	NYS Spanish, E.S.L., French, Social Studies Anc.	12	9	8
Bilingual Science Teacher	80	9/80	B.S. Ed. Spanish M.S. Bilingual Ed.	NYS Spanish DHS	2	2	2
Bilingual Math	60	9/78	B.A. M.A. Spanish	NYS Spanish DHS	12	6	5
Social Studies	40	2/81	B.A. History M.A. History/Ed.	NYS Social Studies DHS	7		2
Art	40	2/82	B.A. M.A. Art	NYS Fine Arts DHS	14		1 semester
Music	20	8/71	B.A. M.A. Music	NYS Music DHS	11		1
Typing	60	9/68	B.A. Sec. Studies M.A.	NYS Gregg Steno, Typing DHS	17	1	2
English	20	10/71	B.A. M.A. English	NYS English DHS	14		1 semester
Resource Teacher	100	10/81	B.A. Pol. Science & 21 Grad. Credits	NYS Social Studies DHS TP - Bilingual Social Studies		2	1
Guidance Counselor	100	10/80	B.A. Biology M.A. Counseling	NYS Guidance, Bilingual Science Biology & General Science	3	5	1 semester

TABLE 12 (Continued)

Staff Characteristics: Professional and Paraprofessional Staffs

Function(s)	% Time Spent in Function	Date Hired	Education	Certification and License	Total Years of Experience	Years of Bilingual Experience	Years of Experience (E.S.L.)
Paraprofessional (Spanish-speaking)	100	10/80	33 undergraduate credits				
Paraprofessional[a] (Spanish-speaking)	100	10/80	B.A.				
Paraprofessional (Spanish-speaking)	100	10/80	30 undergraduate credits				
Paraprofessional (Korean-speaking)	100	1/81	B.A.				

[a]Were teachers in their native country.

TABLE 13

Staff Training Workshops, 1981-82

Date	Topic	Number of Sessions
1/11	Techniques of Teaching E.S.L., Exit and Entry Criteria, Grade Promotion	1
1/25	The Use of Singing, Role Playing, and Skits in E.S.L.	1
2/8	Techniques of Teaching Bilingual Social Studies and Civics Courses	1
2/22	Student Needs and Methodology of Bilingual Math Courses and Bilingual Math Lab Management	1
3/8	Techniques of Teaching Native Language Arts to Hispanic Students (Levels I - III)	1
3/22	Courses of Study and Techniques for Teaching Advanced Native Language Arts to Hispanics	1
4/5	Techniques and Approaches for Teaching Bilingual Science	1
4/19	The Support Services of Guidance	1
5/3	Problems Encountered by Former LEP Students in the Mainstream	1
5/17	Techniques for Individualization of Instruction and Use of Paras	1
	Culminating Activities - Discussion and Work Sessions	
5/24	Session A - Lesson Planing, Tests, and Evaluation	1
6/7	Session B - Course of Study, Curriculum, Professional Assignment	1

VII. FINDINGS

ASSESSMENT PROCEDURES, INSTRUMENTS, AND FINDINGS

The following section presents the assessment instruments and procedures, and the results of the testing to evaluate student achievement in 1981-82. Students were assessed in English reading and language development, growth in their mastery of their native language, mathematics, social studies, and science.

An inventory of attitude toward school, teachers, administrators, and peers was taken by administering the QUESTA questionnaire as proposed. However, the level of funding negotiated for evaluation was not sufficient to cover the cost of keypunching and computer analyses of these data (see Recommendations). As a result, outcomes are not reported. The following are the areas assessed and the instruments used:

Reading in English -- New York City Reading Test (P.S.E.N.)

English as a second language -- CREST (Criterion Referenced English Syntax Test), Levels I, II, III

Mathematics performance -- Teacher-made tests

Science performance -- Teacher-made tests

Social studies performance -- Teacher-made tests

Native language arts performance (Spanish only) -- Teacher-made tests

Attendance -- School and program records

Some of the performance objectives proposed by the project were not stated in clearly measurable terms or did not use criteria appropriate to the instruments identified. The data collected by the program and

provided for evaluation were analyzed in ways considered most consistent with the program's instructional design and the types of data reported.

The following analyses were performed:

On pre/post standardized tests of English reading achievement, statistical and educational significance are reported in Tables 14 and 15. Statistical significance was determined through the application of the correlated t-test model. This statistical analysis demonstrates whether the difference between pre-test and post-test mean scores is larger than would be expected by chance variation alone; i.e. is statistically significant. This analysis does not represent an estimate of how students would have performed in the absence of the program. No such estimate could be made because of the inapplicability of test norms for this population, and the unavailability of an appropriate comparison group.

Educational significance was determined for each grade level by calculating an "effect size" based on observed summary statistics using the procedure recommended by Cohen.* An effect size for the correlated t-test model is an estimate of the difference between pre-test and post-test means expressed in standard deviation units freed of the influence of sample size. It became desirable to establish such an estimate because substantial differences that do exist frequently fail to reach statistical significance if the number of observations for each unit of statistical analysis is small. Similarly, statistically significant differences often are not educationally meaningful.

*Jacob Cohen. Statistical Power Analysis for the Behavioral Sciences (Revised Edition). New York: Academic Press, 1977 Chapter 2.

Thus, statistical and educational significance permit a more meaningful appraisal of project outcomes. As a rule of thumb, the following effect size indices are recommended by Cohen as guides to interpreting educational significance (ES):

a difference of 1/5 = .20 = low ES

a difference of 1/2 = .50 = moderate ES

a difference of 4/5 = .80 = high ES

The instrument used to measure growth in English language was the Criterion Referenced English Syntax Test (CREST), which tests mastery of specific syntactic skills at three levels. Material at the beginning and intermediate levels of the CREST is broken down into 25 objectives per level, such as present-tense forms of the verb "to be" (Level I), or possessive adjectives and pronouns (Level II). Material at the advanced level (Level III) is organized into 15 objectives, such as reflexive pronouns. At each level, students are asked to complete four items for each objective. An item consists of a sentence frame for which the students must supply a word or phrase chosen from four possibilities. Mastery of a skill objective is determined by a student's ability to answer at least three out of four items correctly.

This report provides information on the average number of objectives mastered and the average number of objectives mastered per month of treatment by students who received Title I E.S.L. instruction in the fall and spring semesters (Tables 16 - 21). Information is provided on students' performance at test Levels I, II, and III. Performance breakdowns are reported by grade and level for students who were pre-

and post-tested with the same test level. Tables 16 and 17 present results for Spanish-speaking students, Tables 18 and 19 for Korean-speaking students, and Tables 20 and 21 present results for both Spanish- and Korean-speaking students combined.

The project's evaluation design indicated that subject-area achievement was to be measured by pre- and post-test scores on standardized tests selected by the project director. However, standardized pre- and post-tests were not available in the content areas. Therefore, subject-area achievement is presented in the form of passing rates achieved by students on teacher-made tests.

Program students' success rates in mathematics, science, social studies, and native language arts courses taught in the bilingual program and in the mainstream are reported by grade in Tables 22-26. These tables contain the numbers of students reported as taking the relevant courses, the number reported to have passed, and the percent passing, for fall and for spring courses by language of instruction. Data reported for students who were taking mainstream courses in the same content areas appear under English-taught courses. Tables 22 and 23 report data for Spanish-speaking students by subject area for fall and spring. Table 24 presents data for Korean-speaking students by subject and semester. Tables 25 and 26 present data for Spanish-speaking students in the native language arts courses for the fall and spring.

Comparisons of the attendance rate of program participants with that of the school as a whole are presented by language group in Tables 27 and 28. These tables contain average rates for the school, for the

language groups by grade, the percent difference between school and program by language group, values of the z statistic, and its level of statistical significance. Although the z statistic used here is slightly different than the t described above, it again indicates the extent to which the observed percentage difference varies from what might be expected by chance.

TABLE 14

Results of the New York City Reading Test

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in English Reading Achievement of Spanish-Speaking Students with Full Instructional Treatment on the New York City Reading Test (P.S.E.N.) by Grade

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre/post	T-test	Level of Significance	Educational Significance
9	13	46.3	15.0	52.5	15.1	6.23	.91	3.42	.005	1.0
10	9	33.1	6.7	37.8	11.6	4.66	.45	1.34	NS	0.60
11	26	35.2	6.9	35.1	12.0	-.04	.58	-.01	NS	0.0
12	18	26.7	7.6	31.3	7.0	4.61	.55	2.83	.012	0.81
TOTAL	66	34.8	11.2	38.9	13.6	3.1	.76	2.87	.006	0.47

.Overall, Spanish-speaking program students showed gains which were both statistically and educationally significant.

.Gains for ninth graders were statistically as well as educationally significant.

.Gains for tenth graders were moderately significant educationally, but not significant statistically.

.Eleventh graders were reported as having declined slightly from pre- to post-test. This was neither statistically nor educationally significant.

TABLE 15

Results of the New York City Reading Test

Significance of Mean Total Raw Score Differences Between Initial and Final Test Scores in English Reading Achievement of Korean-Speaking Students with Full Instructional Treatment on the New York City Reading Test (P.S.E.N.) by Grade

		Pre-Test		Post-Test						
Grade	N	Mean	Standard Deviation	Mean	Standard Deviation	Mean Difference	Corr. Pre/post	T-test	Level of Significance	Educational Significance
11	10	26.9	6.5	25.0	5.9	-1.9	.85	-1.71	NS	-0.701
12	5	23.4	8.2	33.2	9.0	9.8	.93	6.41	.003	1.35
TOTAL	15	25.7	7.0	27.7	7.9	2.0	.61	1.17	NS	0.43

.In general, the gains made by Korean-speaking students on the New York City Reading Test were not statistically significant. However, they were of moderate educational significance.

.Although eleventh graders demonstrated an average decline from pre- to post-test, twelfth graders had a statistically significant gain which was highly educationally significant.

.The average scores for the Korean students were quite low.

TABLE 16

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level (E.S.L. Title I Spanish-Speaking Students, Fall Semester)

		LEVEL I					LEVEL II					LEVEL III					TOTALS		
			Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered	
Grade	Average Months of Treatment	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Gain	Gain/Month
9	3.5	27	7.5	12.9	5.4	1.5	4	12.2	20.8	8.5	2.4	1	8.0	13.0	5.0	1.4	32	5.8	1.7
10	3.5	7	13.3	19.4	6.1	1.8	16	8.2	18.9	10.6	3.0	8	9.8	11.4	1.6	0.5	31	7.3	2.1
11	3.5	6	13.8	17.5	3.7	1.0	5	12.4	20.2	7.8	2.2	10	7.0	10.2	3.2	0.9	21	4.7	1.3
12	3.5	----------					1	22.0	22.0	0.0	0.0	7	8.0	10.1	2.1	0.6	8	1.9	0.5
TOTAL		40	9.5	14.7	5.3	1.5	26	10.2	19.5	9.3	2.6	26	8.2	10.6	2.5	0.7	92	5.7	1.6

Note. Number of objectives for each level: Level I (25), Level II (25), Level III (15).

.In general, Spanish-speaking program students mastered 1.6 objectives per month of instruction. This is substantially above the criterion set for students in New York City high school Title I E.S.L. programs (an average of one objective gained per month of instruction). Level II students mastered 2.6 objectives per month of instruction, followed by Level I students who mastered 1.5 objectives per month of instruction.

.The lower gains registered at Level III (0.7 objectives per month of instruction) may be due to the greater difficulty in mastering objectives at Level III.

TABLE 17

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level (E.S.L. Title I Spanish-Speaking Students, Spring Semester)

		LEVEL I					LEVEL II					LEVEL III					TOTALS		
			Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered	
Grade	Average Months of Treatment	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Gain	Gain/Month
9	3.4	23	9.3	13.2	3.9	1.2	9	14.6	18.2	3.7	1.1	1	11.0	15.0	4.0	1.2	33	3.8	1.1
10	3.3	6	12.3	16.5	4.2	1.3	19	18.8	21.7	3.2	1.0	9	8.9	11.1	2.2	0.7	34	3.1	0.9
11	3.4	5	19.2	21.4	2.2	0.6	5	20.2	23.0	2.8	0.8	8	8.6	12.1	3.5	1.0	18	2.9	0.9
12	3.3	----------					----------					6	8.6	10.3	2.1	0.6	6	2.1	0.6
TOTAL	3.4	34	11.3	15.0	3.7	1.1	33	17.7	21.0	3.2	1.0	24	8.8	11.4	2.7	0.8	91	3.2	1.0

Note. Number of objectives for each level: Level I (25), Level II (25), Level III (15).

- In general, Spanish-speaking program students gained one objective per month of instruction. While the program set no objective for achievement in this area, the students' average gain met the criterion set for students in New York City high school Title I E.S.L. programs (an average gain of 1.0 objective gained per month of instruction).
- The objectives gained per month ranged from 0.8 at Level III to 1.1 at Level I. There was a tendency for performance to decrease with test level.

TABLE 18

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level (E.S.L. Title I Korean-Speaking Students, Fall Semester)

		LEVEL I					LEVEL II					LEVEL III					TOTALS		
Grade	Average Months of Treatment	N	Average Number of Objectives Mastered Pre	Post	Gain	Gain/ Month	N	Average Number of Objectives Mastered Pre	Post	Gain	Gain/ Month	N	Average Number of Objectives Mastered Pre	Post	Gain	Gain/ Month	N	Average Number of Objectives Mastered Gain	Gain/Month
9	3.7	1	24.0	25.0	1.0	.3	1	17.0	25.0	8.0	2.2	----------					2	4.5	1.2
10	3.6	1	3.0	10.0	7.0	2.1	7	16.8	22.0	5.1	1.4	2	9.0	12.0	3.0	.8	10	4.9	1.4
11	3.5	1	23.0	25.0	2.0	0.5	1	19.0	24.0	5.0	1.4	6	9.3	11.0	1.7	.4	8	2.1	0.6
12	3.7	----------					----------					2	10.5	13.0	2.5	.7	2	2.5	0.7
TOTAL	3.6	3	16.7	20.0	3.3	1.0	9	17.1	22.6	5.4	1.5	10	9.5	11.7	2.1	.6	22	3.6	1.0

Note. Number of objectives for each level: Level I (25), Level (25), Level III (15).

.In general, Korean students mastered one objective per month of instruction. This achievement met the criterion set for students in New York City high school Title I E.S.L. programs (the trilingual program set no specific objective in this area).

.Achievement ranged from .6 objectives per month at Level III to 1.5 per month at Level II. The lower rate of gain at Level III may be due to the apparently greater difficulty of the objectives at that level.

.The few students tested with Level I made limited gains because their initial pre-test scores were close to the maximum attainable on the CREST. As a result, they could not demonstrate much growth.

TABLE 19

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level (E.S.L. Title I Korean-Speaking Students, Spring Semester)

		LEVEL I					LEVEL II					LEVEL III					TOTALS		
			Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered	
Grade	Average Months of Treatment	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Gain	Gain/Month
9	3.4	----------					1	24.0	25.0	1.0	0.2	1	6.0	13.0	7.0	2.0	2	4.0	1.1
10	3.6	3	3.3	10.3	7.0	2.0	3	20.6	21.6	1.0	0.3	7	9.4	12.4	3.0	0.8	13	3.4	1.0
11	3.3	1	21.0	23.0	2.0	0.5	4	22.2	24.0	1.7	0.5	5	9.0	12.2	3.2	0.9	10	2.5	0.7
12	3.2	----------					----------					2	12.5	14.5	2.0	0.6	2	2.0	0.6
TOTAL	3.3	4	7.7	13.5	5.7	1.6	8	21.8	23.2	1.3	0.4	15	9.4	12.6	3.2	0.9	27	3.0	0.9

Note. Number of objectives for each level: Level I (25), Level II (25), Level III (15).

- In general, Korean-speaking program students gained an average of one objective per month of instruction. This met the criterion set for high school students in Title I E.S.L. programs in New York City.
- Achievement ranged from a high of 1.6 objectives per month at Level I to 0.4 per month at Level II.
- Level II students achieved pre-test scores which were close to the maximum obtainable. As a result, they could not demonstrate much growth. The outcomes indicate that Level II of the CREST was too easy for this group of students.

TABLE 20

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level (All Program Students in Title I E.S.L. Classes, Fall Semester)

		LEVEL I					LEVEL II					LEVEL III					TOTALS		
			Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered	
Grade	Average Months of Treatment	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Gain	Gain/Month
9	3.5	28	8.1	13.3	5.2	1.5	5	13.2	21.6	8.4	2.3	1	8.0	13.0	5.0	1.3	34	5.7	1.6
10	3.5	8	12.0	18.2	6.2	1.8	23	10.9	19.8	8.9	2.5	10	9.6	11.5	1.9	0.5	41	6.7	1.9
11	3.5	7	13.8	17.5	3.7	1.0	6	13.5	20.8	7.3	2.0	16	7.9	10.5	2.6	0.7	29	4.0	1.0
12	3.5	----------					1	22.0	22.0	0.0	0.0	9	8.5	10.8	2.2	0.6	10	2.0	0.6
TOTAL	3.5	43	9.8	15.1	5.3	1.4	35	12.0	20.3	8.3	2.4	36	8.6	10.9	2.4	0.7	114	5.3	1.5

Note. Number of objectives for each level: Level I (25), Level II (25), Level III (15).

- In general, all program students (Spanish and Korean-speaking) mastered 1.5 objectives per month of instruction in the fall. Program students at Level II mastered 2.4 objectives per month of instruction, followed by Level I students who mastered 1.4 objectives per month of instruction.

- Program students at Level III mastered less than one objective per month of instruction, a pattern observed for both language groups.

TABLE 21

Performance of Students Tested on the Criterion Referenced English Syntax Test (CREST): Average Number of Objectives Mastered by Grade and Test Level (All Program Students in Title I E.S.L. Classes, Spring Semester)

		LEVEL I					LEVEL II					LEVEL III					TOTALS		
			Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered					Average Number of Objectives Mastered	
Grade	Average Months of Treatment	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Pre	Post	Gain	Gain/ Month	N	Gain	Gain/Month
9	3.4	23	9.3	13.2	3.9	1.2	10	15.5	18.9	3.4	1.0	2	8.5	14.0	5.5	1.6	35	3.8	1.1
10	3.3	9	9.3	14.4	5.1	1.5	22	18.8	21.7	2.9	0.9	16	9.1	11.7	2.6	0.8	47	3.2	1.0
11	2.4	6	19.5	21.7	2.2	0.6	9	21.1	23.4	2.3	0.7	13	8.8	12.2	3.4	1.0	28	2.8	0.8
12	3.3	----------					----------					8	9.4	11.4	2.0	0.6	9	2.1	0.6
TOTAL	3.3	38	10.9	14.8	3.9	1.2	41	18.5	21.4	2.9	0.9	39	9.0	11.9	2.1	0.8	119	3.2	1.0

Note. Number of objectives for each level: Level I (25), Level II (25), Level III (15).

- Overall, program students mastered one objective per month of instruction in the spring. Achievement ranged from 1.2 objectives per month (Level I) to 0.8 (Level III), and was inversely related to test level.
- The overall rate of mastery was equal to that set as the objective for New York City high school students in Title I E.S.L. programs.
- Lower rates of achievement demonstrated by eleventh graders at Level I and eleventh and twelfth graders at Level II may be attributable to relatively high pre-test scores, which may have limited the students' ability to demonstrate growth.

TABLE 22

Number and Percent of Spanish-Speaking Students Passing Teacher-Made Examinations in Content-Area Classes in the Fall by Grade and Language of Instruction

Subject	Grade	ENGLISH N	ENGLISH Number Passing	ENGLISH Percent Passing	SPANISH N	SPANISH Number Passing	SPANISH Percent Passing	TOTAL N	TOTAL Percent Passing
Mathematics	9	17	10	58.8	35	17	48.6	52	52.0
	10	12	9	75.0	37	34	91.9	49	88.0
	11	6	4	66.7	29	22	75.9	35	74.0
	12	6	4	66.7	7	5	71.4	13	69.0
TOTAL		41	27	66.0	108	78	72.8	149	70.0
Science	9	14	11	78.6	33	23	69.7	47	72.0
	10	11	7	63.6	39	33	84.6	50	80.0
	11	5	4	80.0	22	16	72.7	27	74.0
	12	2	2	100.0	3	3	100.0	5	100.0
TOTAL		32	24	75.0	95	75	79.0	127	78.0
Social Studies	9	17	13	76.5	34	23	67.6	51	71.0
	10	13	11	84.6	37	30	81.1	50	82.0
	11	4	4	100.0	32	27	84.4	36	78.0
	12	11	8	72.7	11	9	81.8	22	77.0
TOTAL		45	36	80.0	114	89	78.0	159	78.6

TABLE 22 (continued)

- In mathematics courses taught in the fall, 66 percent of the program students instructed in English (in mainstream classes) passed, as did 72 percent of the program students instructed in Spanish.

- In science courses taught in the fall, 75 percent of the students instructed in English passed, as did 79 percent of the students instructed in Spanish.

- In social studies, 80 percent of the students in mainstream classes passed as did 78 percent of the students in bilingual classes.

- In general, the lowest passing rates were achieved by students at grade nine, and passing rates generally increased as grade increased.

TABLE 23

Number and Percent of Spanish-Speaking Students Passing Teacher-Made Examinations in Content-Area Classes in the Spring by Grade and Language of Instruction

Subject	Grade	ENGLISH N	ENGLISH Number Passing	ENGLISH Percent Passing	SPANISH N	SPANISH Number Passing	SPANISH Percent Passing	TOTAL N	TOTAL Percent Passing
Mathematics	9	17	11	64.7	40	20	55.0	57	58.0
	10	11	7	63.7	36	19	52.8	47	55.0
	11	10	9	90.0	22	18	81.8	32	84.0
	12	1	1	100.0	3	3	100.0	4	100.0
TOTAL		39	28	72.0	101	62	61.0	140	64.0
Science	9	14	11	78.6	38	19	50.0	52	58.0
	10	12	9	75.0	33	24	72.7	45	73.0
	11	6	5	83.3	17	13	76.5	23	78.0
	12	2	2	100.0	1	1	100.0	3	100.0
TOTAL		38	27	71.0	89	57	64.0	127	66.0
Social Studies	9	16	12	75.0	38	22	57.9	54	63.0
	10	11	6	54.5	30	23	76.7	41	71.0
	11	8	6	75.0	25	22	88.0	33	85.0
	12	4	4	100.0	10	9	90.0	14	93.0
TOTAL		39	28	72.0	93	76	82.0	132	79.0

TABLE 23 (continued)

- The number of students enrolled in bilingual classes was reported to be more than double the number reported in mainstream classes.

- In mathematics courses taught in the spring, 72 percent of the Spanish-speaking program students in mainstream classes passed, as did 61 percent of the program students in bilingual classes where Spanish was the medium of instruction.

- In science courses taught in the spring, 71 percent of the students instructed in English passed and 64 percent of the students instructed in Spanish passed.

- In social studies, 72 percent of the students in mainstream classes passed, as did 82 percent of the students enrolled in bilingual classes.

- Ninth graders generally had the lowest passing rates, and the passing rate tended to increase with grade.

TABLE 24

Number and Percent of Korean-Speaking Students Passing Teacher-Made Examinations in Mainstream Subject-Area Courses, by Semester

Subject	FALL 1981 N	Number Passing	Percent Passing	SPRING 1982 N	Number Passing	Percent Passing	TOTAL N	Percent Passing
Mathematics	28	18	64.3	34	28	82.4	62	74.0
Science	23	17	73.9	26	20	76.9	49	76.0
Social Studies	28	22	78.6	34	25	73.5	62	76.0

Note. The data were not presented by grade because of the low number of cases reported.

- Sixty-four percent of the Korean-speaking program students passed mainstream mathematics courses in the fall, and 82 percent passed in the spring.
- Seventy-four percent of the Korean-speaking program students passed mainstream science courses in the fall, and 77 percent passed in the spring.
- Seventy-nine percent of the Korean-speaking program students passed mainstream social studies courses in the fall, and 74 percent passed in the spring.

TABLE 25

Number of Spanish-Speaking Students Attending Courses and Percent Passing Teacher-Made Examinations in Native Language Arts (Fall)

Course	Grade 9		Grade 10		Grade 11		Grade 12		Total	
	N	% Passing	N	% Passing	N	% Passing	N	% Passing	N	% Passing
Spanish	50	86.0	48	85.4	34	100.0	20	100.0	152	87.0

- Eighty-seven percent of the students taking teacher-made examinations in Spanish in the fall term passed them.
- The passing rate ranges from a low of 85.4 percent in grade 10 to a high of 100 percent in grades 11 and 12.

TABLE 26

Number of Spanish-Speaking Students Attending Courses and Percent Passing Teacher-Made Examinations in Native Language Arts (Spring)

Course	Grade 9		Grade 10		Grade 11		Grade 12		Total	
	N	% Passing	N	% Passing	N	% Passing	N	% Passing	N	% Passing
Spanish	57	70.2	46	80.4	30	86.7	9	77.8	142	77.0

- Seventy-seven percent of the students taking teacher-made examinations in Spanish in the spring term passed them. The passing rate ranges from a low of 70.2 percent in grade 9 to a high of 86.7 percent in grade 11.

- The passing rate was 10 percentage points lower in the spring than in the fall. It was higher in the fall at every grade level.

TABLE 27

Significance of the Difference Between the Attendance Percentage of Spanish-Speaking Students and the Attendance Percentage of the School

Grade	N	Mean Percentage	Standard Deviation
9	59	93.0	11.2
10	53	93.5	6.9
11	38	90.1	17.4
12	28	94.0	7.1
TOTAL	178	92.7	11.3

Average School-Wide Attendance Percentage: 82.6

Percentage Difference = 10.1 z = 3.55 p = .01

.The average attendance for Spanish-speaking students (92.7 percent) was 10.1 percentage points higher than that of the school as a whole (82.6 percent). The difference between the two attendance rates is statistically significant at the .01 level.

.The highest percent attendance (94.0) was reported for grade 12; the lowest (90.1) for grade 11.

.The high standard deviation (17.4) for grade 11 indicates that some extremely low scores may be depressing mean percentage attendance.

TABLE 28

Significance of the Difference Between the Attendance Percentage of Korean-Speaking Students and the Attendance Percentage of the School

Grade	N	Mean Percentage	Standard Deviation
9	3	99.8	0.3
10	13	95.3	8.4
11	14	96.8	4.3
12	5	95.6	2.0
TOTAL	35	96.3	5.8

Average School-Wide Attendance Percentage: 82.6

Percentage Difference = 13.7 z = 2.14 p = .04

- The average attendance for Korean-speaking students (96.3 percent) was 13.7 percentage points higher than that of the school as a whole (82.6 percent). The difference between the two attendance rates is statistically significant at the .04 level.
- The highest percent attendance was reported for grade 9 (note, however, that the number of students reported is very low). The lowest attendance percent (95.3) was reported for grade 10.
- The relatively high standard deviation (8.4) for grade 10 indicates that some lower scores may be depressing the mean percentage of attendance.

SUMMARY OF FINDINGS

Reading in English

In English reading achievement, Spanish-speaking students pre- and post-tested with the New York City Reading Test (P.S.E.N.) demonstrated gains that were statistically (α=.006) and educationally significant (ES =.47). For Korean-speaking students, the average gains made were not statistically significant; however, they were of moderate educational significance (ES =.43). Scores for most bilingual students however, were low (see Recommendations).

Mastery of English Syntax Skills

Overall, program students achieved an average of 1.5 curricular objectives per month of instruction on the Criterion Referenced English Syntax Test (CREST) during the fall term. Achievement ranged from 0.7 objectives per month at Level III to 2.4 at Level II. In the spring term, program students mastered an overall average of 1.0 objectives per month of treatment, with achievement ranging from 0.8 objectives mastered per month at Level III to 1.2 at Level I. Achievement tended to be lower at Level III, reflecting the apparently greater difficulty of Level III objectives and the high pre-test scores achieved by students at this level in the spring.

While the program set no objective for achievement on the CREST, the outcomes met or surpassed the criterion set for students in Title I high school E.S.L. programs.

In the fall term Spanish-speaking program students tested with the CREST demonstrated an average gain of 1.6 objectives per month of

instruction. For Korean-speaking students tested with the same instrument, the demonstrated gain was 1.0 objectives per month of instruction.

In the spring, Spanish-speaking program students tested with the CREST demonstrated an average gain of 1.0 objectives per month of instruction. For Korean-speaking students tested with the same instrument, the demonstrated average gain was 0.9 objectives per month of instruction. This lower rate was due to extremely high pre-test scores of students who took Level II of the CREST. High pre-test scores restricted the possibility to show true growth.

Content-Area Subjects

Mathematics. The overall passing rate of Spanish-speaking program students in fall mathematics courses was 70 percent. The overall passing rate in the spring was 64 percent. In mathematics courses taught in Spanish, the overall passing rates were almost 73 percent in the fall and 61 percent in the spring. For students in mainstream mathematics classes, the figures were 66 and 72 percent, respectively. The overall passing rate for Korean-speaking program students in mathematics classes was 64 percent in the fall and 82 percent in the spring. All students reported were taking mainstream classes.

Science. The passing rate for Spanish-speaking program students in mainstream science classes was 75 percent in the fall, and 71 percent in the spring. The passing rate in bilingual science classes was 79 percent in the fall and 64 percent in the spring. Overall passing rates were 78 and 66 percent, respectively.

The passing rate for Korean-speaking program students in mainstream science courses was 74 percent in the fall and 77 percent in the spring, for a total of 76 percent overall.

Social studies. The passing rate for Spanish-speaking program students in mainstream social studies courses was 80 percent in the fall and 72 percent in the spring. Passing rates in bilingual social studies courses were 78 percent (fall) and 82 percent (spring). Overall passsing rates were 79 percent in both fall and spring terms.

The passing rate of Korean-speaking program students in mainstream social studies courses was 79 percent in the fall and 74 percent in the spring, for a total of 76 percent overall.

Native language arts. Eighty-seven percent of the Spanish-speaking program students who took teacher-made examinations in the fall Spanish classes passed them. Seventy-seven percent of the students taking the examinations in the spring passed them.

Attendance. The attendance rate for Spanish-speaking program students (92.7 percent) was 10.1 percentage points higher than the school-wide attendance rate (82.6 percent). This difference was significant at the .01 level.

The attendance rate for Korean-speaking students (96.3 percent) was 13.7 percentage points above the school-wide rate. This difference was statistically significant at the .04 level.

VII. CONCLUSIONS AND RECOMMENDATIONS

During its second year in operation, the bilingual program at Flushing High School continued to provide the target population with quality instruction. The introduction of new courses as well as the diversity of electives offered served to strengthen the previous year's instructional program. The development of additional curricula and acquisition of library and resource materials further enhanced the project's effectiveness. Staff development training sessions were successfully implemented both in relation to content and participation.

In brief, the program staff, encouraged by the school principal and supported by administrative/supervisory as well as other pedagogical staff worked effectively towards creating a warm, supportive, learning environment in which students could make important adjustments to a new setting and expectations.

It is strongly recommended that the program continue in its present course. To assist in this endeavor, the following suggestions are offered:

.Greater effort should be made to elicit parent input into the program and to communicate with the community at large. In addition to the school newsletter, cultural activities involving students, parents, and community members should be considered.

.It is suggested that the successful implementation of courses, such as civics for new Americans or Oriental calligraphy be expanded to include not only immigrants but also the general student population as

a means of bridging cultural gaps and engendering greater cross-cultural understanding.

.It is recommended that the program keep a file of materials documenting student achievements in the affective domain. Information on students' scholastic achievements, participation in activities in and outside of school, for example, would be useful indicators of the program's effectiveness.

.It is recommended that the project's evaluation design be revised, so that objectives are stated with criterion levels appropriate to the instruments proposed. The use of the New York City Reading and Mathematics Test (P.S.E.N.) should be re-evaluated in light of the generally low pre-test scores made by program students: this instrument does not appear to be a valid instrument for assessing the growth in reading ability of many program students.

It is further suggested that the QUESTA and other questionnaires be eliminated from the program's evaluation design, as adequate funding for the analysis of such data is generally not available. In addition, locally developed or modified attitude scales of self concept, attitude and the like are frequently of limited reliability and usefulness. Such "hard" information as attendance and drop-out rates, rates of suspensions, and honors received may serve as better and more accessible indicators of student attitudes towards school.

Finally, the successful implementation of the project warrants continued funding.